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Coyote/Human Interactions in the City of Long Beach, CA

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Abstract

Coyotes (*Canis latrans*), while an integral part of a healthy ecosystem, have posed prominent problems across the United States in cities and residential areas, including the city of Long Beach, CA. This study aimed to quantify coyote presence in the city to better understand urban coyote behavior. Twelve Bushnell game cameras, eight Browning game cameras, and one YI surveillance video camera were deployed in the area surrounding Long Beach Fire Station #19. Nearly 90,000 photos and over 65 hours of video were taken by these cameras. Collectively, 164 sightings in this area were recorded over a period of five weeks. A lactating female was identified in one of the photos and photos of four puppies were taken, which provides strong evidence of a den nearby. Most of these sightings occurred between the hours of 3 and 7 AM, however there were photos taken at all times of the day. Three photos were taken where a coyote visibly has something in its mouth. Ten coyote scats were also recovered in the field and their contents will be analyzed in the future. These data will be used over the next three years in the development of a comprehensive coyote management plan to promote coexistence between humans and coyotes in Long Beach. We hope to apply our refined methodologies in the future so that they can be applied on a more general level to mitigate similar coyote management problems in other urban areas.

Introduction

- The objective of this experiment is to gather information on the current human-coyote relationship in Long Beach
- Promote the peaceful coexistence of humans and coyotes in this urban area

Methods

Coyote Behavior

- Existing data were recovered from city wildlife management professionals and reviewed.
- Photo and video data were recovered from game cameras and scat samples were retrieved from a field site established by our team to analyze coyote behavior and diet.

Figure 1. Example game camera setup at a Fire Station in Long Beach.

Initial Assessment of Human-Coyote Relationship in Long Beach

- Key informant interviews were carried out
- Relationships with local residents were established to receive updates on coyote activity in the area
- Neighborhood educational initiatives were created to provide the public with coyote facts

Methods cont.

Time Period

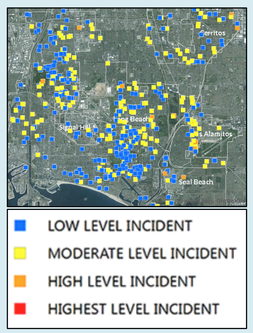
- Started in March 2017 (coyote mating season)
- Will continue to run for the next three years, longer if necessary

Locations

- Sites for this study are currently being scouted in the City of Long Beach, California and the Los Angeles neighborhoods of Playa Vista and Westchester
- A field station was established by our team at Long Beach Fire Station #19 in May 2017.

Data

Coyote Incident Reports



Pictured on the left is a map of coyote incident reports by citizens of Long Beach, spanning January 2016 through the end of January 2017. This data was used to form an accurate picture of urban coyote behavior, which will allow for the creation of a comprehensive plan of action to promote peaceful coexistence between humans and coyotes.

Housecat GPS Data

Six housecats were monitored in Long Beach and Westchester with GPS trackers and collar cameras. The movement patterns of domestic housecats were collected and analyzed in order to estimate coyote territory size and interactions between coyotes and cats in these urban areas.

Figure 2. Smokey, one of the cats being monitored in Westchester, pictured with his collar camera/ GPS device.

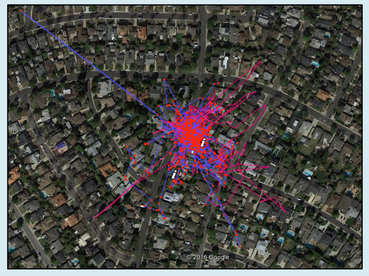


Figure 3. Data points collected from Smokey's GPS on February 19, 2017.

Figure 4. Rough estimate of Smokey's path on February 19, 2017.

Data cont.

Over 95,000 photos were recovered from the game cameras deployed at the fire station. Of these, several photos were collected that provided insight on coyote behavior.

Figure 5. A mother coyote with three pups, the most pups seen by our cameras in a single photo.

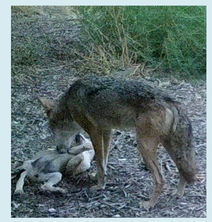


Figure 6. A mother and her pup displaying play behavior. This image provided insight in regards to coyote behavior as the coyotes were using this field to rest and play rather than to hunt.

Discussion

This initial phase created a basis for the subsequent years and launched further study of coyote behavior. We collected:

- Photos and videos of a family of five coyotes inhabiting the grounds of the field station displaying urban coyote behavior that can offer insight into family dynamics
- Animal remains and scat that will be analyzed to determine the dietary components of the urban coyotes

We hope that this study will continue to:

- Offer results that will allow for a comprehensive coyote management system to be created, contributing to the improvement of the coexistence between coyotes and humans in Long Beach and other urban areas
- Change the public view of coyotes to one of respectful tolerance
- Provide data that can be used to analyze urban coyote ecology and urban animal ecology as a whole.

Literature Cited

Long Beach Animal Control Services

Narragansett Bay Coyote Study

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